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Thank you for the opportunity to comment on the Proposal. As you can see from the letterhead, my experience is in this field. I worked for 44 ½ years in the Engineering Organization at United Airlines Maintenance Center in San Francisco. During that time I have participated in many meetings and activities associated with the development of the original 16G regulations and advisory material as well as the implementation of Uniteds B-777 design program. However this response is my personal view of this proposal and I am not speaking for United or the Air Transport Association.

I will phrase this response by first presenting some general comments and then move on to specific recommendations.

Economic Conditions

It is not an understatement to say that in all my experience in air transportation that I have never seen as dismal an economic environment as exists at the present time. The entire industry is awash in a sea of red ink. Bankruptcy looms and indeed has already hit one major carrier. With a few exceptions, balance sheets in the industry are showing a rapid loss of liquidity. Carriers are laying off large numbers of employees, dropping service to locations, grounding aircraft and scrambling for strategies that will assure survival. Not an environment for discretionary spending where it can be deferred. This is a time where costs will be lowered only by getting back to minimum expenses.

Safety issues

The record of survivable accidents and the contribution of dynamically certified seats to survival have been discussed at great length over the recent past. I have participated in many of them in the past and have no desire or need to repeat them in this document. There are enough on the record and the FAA has access to them. Looking at the discussion in the Notice only raised one concern in my mind. That concern is about forecasting the future of these events. In my opinion, any forecast should account for the non-linearity of these trends. Another aspect to that is the fact that there are a large number of seats in current aircraft that are of a construction that caters to dynamic crash loads.

While they are not formally certified to that case, they are in service and are contributing, hopefully, to improved survivability in theory and possibly in real life. This takes me back to my main point and that is that their contributions could cause an expectation that the new proposal may be forecasting greater real life improvements than will be realized. Kind of a good news/bad news case. The good news is that the design is already doing well and the bad news is that the proposal may be positing overly optimistic gains.

Incentives

The proposal is that if you do any thing to the seating in the airplane, you have to upgrade all the seats. Depending on the manufacturer and the seat type, this upgrade can range from a Service Bulletin to complete replacement. Overall, this is a disincentive to do any thing. Let me pose a couple of examples. Many aircraft in service have a number of STC's on record for them that reflect changes driven by marketing forces such as changing the mix of First Class and Economy. Many carriers also have stored seats from those previous configurations. It may be that current economic conditions dictates the desirability of reverting to an earlier configuration using the previously installed seats. In another case, a carrier may want to replace seats in a particular zone without changing the seat count. In yet another case a carrier may want to delete some entertainment systems in seats to save weight and maintenance costs. Do all these cases trigger a full-blown upgrade to 25.562? The Notice is not clear about this. Clarification is needed.

Flight Attendants

I was struck by the discussion about Flight Attendant seat and the argument for upgrading them with the emphasis on their contribution to passenger survival by assuring the attendants continued functionality. What I didn't see in the proposal was any further recognition of that argument. If it is desirable to upgrade those seats as is argued, I would have expected to see those seats decoupled and subject to an independent proposal. Otherwise replacement of those seats is held hostage to the "one size fits all" concept and the disincentive discussion above applies.

Another issue with these seats is how they are mounted. Some cases are quite straightforward. On many wide body airplanes the seat is mounted on a freestanding structure that attaches to the seat track. Their replacement should be relatively simple. Then there are seats that are mounted on "monuments" and face aft. Seats that well may have a different pattern of attaching fittings will replace these seats. There a more complicated solution is required and this may be handled by creating an independent panel that mounts to the floor and overhead structure. Complications associated with such a design may include encroachment into an escape aisle. Forward facing seats mounted on "Monuments" will pose a greater challenge, as there will likely be different attachment patters and loading issues for the monument. The most problematic

case is existing installations on between aisle panels or panels mounted near exits. The dynamics of these panels will be a real problem. You can refresh yourself on this subject by referring to the experience with the panel-mounted seats at Door 1 in the B-777 certification.

The main point of this discussion is to create awareness of what the real cost of the Rule would be with these seats.

Other incentives

Although it is technically outside the authority of the FAA, I think that in the present environment it would be appropriate for the Department of Transportation to address the issue of financial incentives. Given the fact that the current economic environment is so dismal, which is certain to cause implementation of such a rule to lag, it ought to be in the realm on possibility to have there be tax incentives for such expenses if they are taken early as a consequence of accelerated accomplishments of the Rules requirements.

Recommendations

1. Per the discussion above, separate Cabin Crew seats from passenger seats.
2. Engage the Department of Transportation in creating some tax relief incentives as mentioned above.
3. Create draft Advisory Circular material to address issues mentioned above related to "marginal" cases of partial aircraft changes and other such issues. This advisory material should also recognize the need for staffing and responsive process for the broad range of aircraft types and configurations that will arise as such a Rule takes effect.

Thank you very much.

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